

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 April 2004 (22.04.2004)

PCT

(10) International Publication Number
WO 2004/032911 A3

(51) International Patent Classification⁷: **A61K 31/165**,
31/216, 31/137, 31/277, 31/662, A61P 35/00, 35/02,
37/06, 31/22, 27/02, 19/08, 17/00

(21) International Application Number:
PCT/CA2003/001558

(22) International Filing Date: 10 October 2003 (10.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/417,642 11 October 2002 (11.10.2002) US
2,407,755 11 October 2002 (11.10.2002) CA

(71) Applicant (for all designated States except US): **THE HOSPITAL FOR SICK CHILDREN [CA/CA]**; 555 University Avenue, Toronto, Ontario M5G 1X8 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ROIFMAN, Chaim, M. [CA/CA]**; 33 Christine Crescent, North York, Ontario M2R 1A4 (CA). **SIMON, Amos, J. [IL/IL]**; 4 Mevo-Brosh, Kiryat Hasavionim, P.O. Box 12413, 56452 Yehud (IL). **DEMIN, Peter, M. [CA/CA]**; 40 High Park Avenue, Apt.

414, Toronto, Ontario M6P 2S1 (CA). **ROUNOVA, Olga, B. [RU/CA]**; 40 High Park Avenue, Apt. 414, Toronto, Ontario M6P 2S1 (CA).

(74) Agent: **KANG, Yoon**; SMART & BIGGAR, 438 University Avenue, Suite 1500, Box 111, Toronto, Ontario M5G 2K8 (CA).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

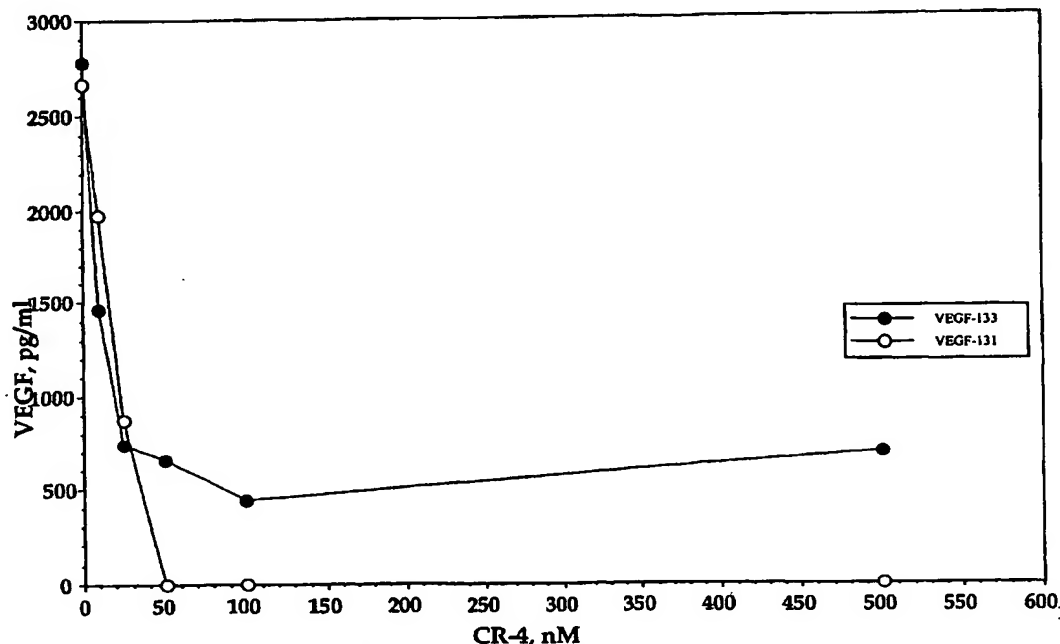
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: STYRYLACRYLONITRILE COMPOUNDS FOR INHIBITION OF VASCULAR ENDOTHELIAL GROWTH FACTOR



(57) Abstract: This invention relates to therapeutic organic compounds and inhibition of secretion of vascular endothelial growth factor (VEGF) and its effects, including angiogenesis.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:
17 June 2004

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA/03/01558

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/165 A61K31/216 A61K31/137 A61K31/277 A61K31/662
A61P35/00 A61P35/02 A61P37/06 A61P31/22 A61P27/02
A61P19/08 A61P17/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, EMBASE, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P	WO 03 062190 A (GRUNBERGER THOMAS ; DEMIN PETER (CA); ROIFMAN CHAIM M (CA); ROUNOVA) 31 July 2003 (2003-07-31) claims 1-37	2, 3, 5-7, 9-16, 18, 19, 21, 22, 24, 25, 27-29, 31, 32, 34-40, 42, 43
X, P	WO 03 030895 A (GRUNBERGER THOMAS ; DEMIN PETER M (CA); FREYWALD ANDREW (CA); ROIFM) 17 April 2003 (2003-04-17) the whole document -/-	1-43, 54, 56, 57, 69



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

* & * document member of the same patent family

Date of the actual completion of the international search

24 March 2004

Date of mailing of the international search report

05/04/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Siatou, E

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 03/01558

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 01 79158 A (GRUNBERGER THOMAS ;DEMIN PETER (CA); ROIFMAN CHAIM M (CA); ROUNOVA) 25 October 2001 (2001-10-25)</p> <p>claims 1-43</p>	<p>1,4,7,8, 11-17, 20,23, 26,29, 30,33, 36-41, 54,56, 57,69</p>

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA 03/01558

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 1-19, 23-25, 30-32, 52-64, 66-69 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

II Citation on patent family members

International Application No

PCT/CA 03/01558

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03062190	A	31-07-2003	WO 03062190 A1	31-07-2003
WO 03030895	A	17-04-2003	WO 03030895 A1	17-04-2003
WO 0179158	A	25-10-2001	AU 4820101 A	30-10-2001
			BR 0110087 A	17-02-2004
			WO 0179158 A2	25-10-2001
			CA 2406160 A1	25-10-2001
			CN 1429202 T	09-07-2003
			EP 1272457 A2	08-01-2003
			GB 2378948 A	26-02-2003
			JP 2003531133 T	21-10-2003
			US 2003109502 A1	12-06-2003